ACADEMIA DE ŞTIINŢE A MOLDOVEI

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ACADEMY OF SCIENCES OF MOLDOVA

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Academic Committee
CORE Academy of Science and Humanities

ACCEPTANCE LETTER

Dear Secretary of the Academic Committee,

I feel deeply honored by my election as a Fellow of the CORE Academy of Science and Humanities in the Division of Engineering and Applied Sciences.

My academic career began nearly half a century ago, at a time when many research groups were searching for efficient luminescent materials for the blue spectral region. During that period, I was involved in the study of new ternary and multinary semiconductor compounds. Later, at the beginning of the 1990s, following the discovery of light-emitting porous silicon in 1990, I pioneered research on porous semiconductor compounds such as GaP, InP, and GaAs. My research group contributed substantially to the preparation, characterization, and application of self-organized porous III–V semiconductors fabricated by electrochemical anodic etching.
In 2001, after a research stay at the University of Michigan in Ann Arbor, I founded the National Center for Materials Study and Testing in Moldova and began a new scientific journey devoted to the development of advanced nanotechnologies and nanomaterials. We pioneered Surface Charge Lithography and the maskless fabrication of ultrathin, suspended, and nanoperforated gallium nitride membranes. We also succeeded in preparing ultrathin two-dimensional photonic crystals and in fabricating memristor devices, as well as luminescent nano- and micro-engines.
Later, we invented Aerogalnite, or aero-GaN, the first artificial material exhibiting dual hydrophobic/hydrophilic properties. We have also developed highly porous and stretchable membranes with properties resembling those of living-cell membranes, as well as robust liquid marbles with promising applications as micro-bioreactors.

Several years ago, I initiated the organization of multidisciplinary Summer Schools at the Academy of Sciences of Moldova, with the participation of many prominent scientists, including Nobel Prize laureates. These schools play an important role in attracting talented young people to scientific research.

As a Fellow of the International Science Council, I do my best to contribute to the consolidation of the scientific community and to make the voice of science heard at the national and international levels.

I am grateful for this recognition and look forward to engaging with fellow members of the CORE Academy to strengthen international collaboration and to help society address the increasingly pressing challenges of the 21st century.

Sincerely,
Prof. Ion Tiginyanu
President of the Academy of Sciences of Moldova
Vice-President of the Romanian Academic Council
Director of the National Center for Materials Study and Testing, Technical University of Moldova